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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/881,735	06/18/2001	Ming-Tang Chang	2771-11	8768

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NIXON & VANDERHYE, PC
1100 N GLEBE ROAD
8TH FLOOR
ARLINGTON, VA 22201-4714

EXAMINER

WHITE, EVERETT NMN

ART UNIT PAPER NUMBER

1623

DATE MAILED: 03/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/881,735

Applicant(s)

CHANG ET AL.

Examiner

EVERETT WHITE

Art Unit

1623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8,9 and 14-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8,9 and 14-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 1623

DETAILED ACTION

1. The amendment filed October 24, 2003 has been received, entered and carefully considered. The amendment affects the instant application accordingly:

- (A) Claims 1-7, 10-13 and 17-35 have been canceled.
- (B) Claims 8, 9 and 14 have been amended.
- (C) Comments regarding Office Action have been provided drawn to:
 - (i) claim objections, which have been withdrawn.

2. Claims 8, 9 and 14-16 are pending in the case.

Claim Objections

3. Claims 14-16 are objected to because of the following informalities: In Claim 14, line 2, the term "mm*/n**" is set forth incorrectly since the specification discloses the term as "mm*/m**" on page 34, line 864. The phrase "The starch" at the beginning of Claims 15 and 16 should be changed to -- A starch --. Appropriate correction is required.

Withdrawal of Allowed Claims

4. The indicated allowability of claims 15 and 16 is withdrawn in view of the newly discovered reference(s) to Friedman et al (US Patent No. 4,789,738). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 8, 9 and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Friedman et al (US Patent No. 4,789,738, already of record).

Art Unit: 1623

Applicants claim a starch extracted from a grain having a genotype of wxwxWx/AeAeae; a starch extracted from a grain having a genotype of Aeaeae/WxWxwx; a starch extracted from the grain produced by a plant in which the genotype of the grain is mm*/n**, where m=first mutant n=second mutant and * equals wild type; a starch extracted from grain having at least four doses of mutant and two doses of wild type, such that the genotype has wild type on each side; and a starch extracted from grain having at least three doses of mutant and three doses of wild type, such that the genotype has mutation on each side.

It is noted that the instant claims are directed to a starch product limited by the grain from which the starch is extracted. In considering the claimed language instantly set forth, any possible novel features set forth in the claimed invention is only directed to the grain, not the starch. By describing the grain from which the claimed starch is derived, the claims are in the form of product-by-process claims. The Office considers product-by-process claims as product claims. Applicants are reminded that process limitations cannot impart patentability to a product that is not patentably distinguished over the prior art. *In re Thorpe et al.* (CAFC 1985), *supra*; *In re Dike* (CCPA 1968) 394 F2d 584, 157 USPQ 581; *Tri-Wall Containers, Inc. v. United States et al.* (Ct Cls 1969) 408 F2d 748, 161 USPQ 116; *In re Brown et al.* (CCPA 1972) 450 F2d 531, 173 USPQ 685; *Ex parte Edwards et al.* (BPAI 1986) 231 USPQ 981. The Examiner's position is such that since only a starch product is instantly claimed, only features that distinguish the claimed starch product, per se, from starch products of the prior art should be analyzed for allowability – not the grain described in the claims.

The Friedman et al patent shows that the extraction of starch from grain is well known in the art. See column 3, lines 3 to 50, wherein the Friedman patent describes a process for extracting starch from corn kernels to produce a starch product. The text is set forth below.

Extraction of starch from the plant is well known and typically entails a milling process. In accordance with the present invention, a wet milling process is used to advantage to extract the corn starch from the corn kernels. Corn wet milling comprises the steps of steeping and grinding the corn kernel and then separating the starch from the other components of the kernel. Prior to steeping, the kernels are subjected to a cleaning process to remove any

Art Unit: 1623

debris which may be present. This cleaning process is usually done at the wet milling plant. The kernels are then steeped in a steep tank where the kernels are contacted with a countercurrent flow of water at an elevated temperature of about 120.degree. F. and containing sulfur dioxide in an amount between about 0.1 to about 0.2% by weight water. The kernels are maintained in the steep tank for about 24 to 48 hours. Next, the kernels are dewatered and subject to a first set of attrition type mills.

The first set of mills generally grind and rupture the kernels causing the germ, corn oil, to be released from the rest of the kernel. A typical attrition type mill used in commercial wet milling processes is sold under the brand name Bauer. The released germ is then separated from the other parts of the kernel by centrifugation. Throughout the grinding steps of the wet milling process the kernel and the kernel components are maintained in a slurry of about 40% by weight solids.

The remaining kernel components which include starch, hull, fiber and gluten, are subjected to a second set of attrition type mills such as the Bauer Mill, to further grind the components and separate the hull and fiber from the starch and gluten. Hull and fiber are generally referred to as bran. Washing screens are used to separate the bran from the starch and gluten. The starch and gluten pass through the screens while the bran does not.

Next, the starch is separated from the protein. This step is done either by centrifugation or by a third grind followed by centrifugation. A commercial centrifugation separator suitable for the present process is the Merco centrifugal separator.

The slurry which contains the starch granules is then dewatered and the resulting granules washed with fresh water and dried in a conventional manner preferably to about 12% moisture.

In this manner, the substantially pure starch of the present invention is extracted from a starch bearing plant of the wxfl1 genotype.

Applicants have not distinguished the instantly claimed starch product, per se, from the starch product set forth in the Friedman et al patent. Accordingly, the starch product of instant Claims 8, 9 and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by the Friedman et al patent.

7. Applicant's arguments with respect to claims 8, 9 and 14-16 have been considered but are moot in view of the new ground(s) of rejection.

Information Disclosure Statement

8. The reference "BIOLOGICAL ABSTRACTS, Reporting Worldwide Research in Life science, Vol. 81, 1986, No. 1, Jan. 1, 1989" was not available to the Examiner at the time of processing of this Office action.

Summary

Art Unit: 1623

9. All the pending claims are rejected.

Examiner's Telephone Number, Fax Number, and Other Information

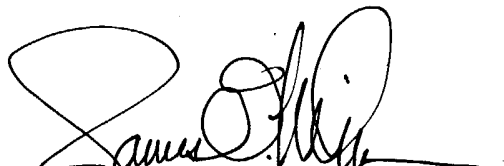
10. For 24 hour access to patent application information 7 days per week, or for filing applications, please visit our website at www.uspto.gov and click on the button "Patent Electronic Business Center" for more information.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Everett White whose telephone number is (571) 272-0660. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O. Wilson, can be reached on (571) 272-0661. The fax phone number for this Group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1235.


E. White


James O. Wilson
Supervisory Primary Examiner
Technology Center 1600